

IN THE CLAIMS:

1. (Currently Amended) A method of stimulating growth and differentiation of mammalian pancreatic epithelial cells into three-dimensional cystic-ductular structures containing insulin-secreting cells wherein said pancreatic epithelial cells are isolated from fetal ~~or adult~~ pancreas, said method comprising culturing said pancreatic epithelial cells in the presence of a bone morphogenetic protein (BMP) and at least one of laminin-1 or laminin-1-containing extracellular matrix ECM for a time and under conditions sufficient for colonies to form wherein said colonies comprise three-dimensional cystic-ductular structures containing insulin-secreting cells.

2. (Previously Presented) The method of Claim 1 wherein the BMP molecule is a member of the TGF- β family.

3. (Previously Presented) The method of Claim 2 wherein the BMP molecule is a heterodimer from two or more BMP molecules.

4. (Previously Presented) The method of Claim 1 wherein laminin-1 is provided at a concentration of from about 1 $\mu\text{g/ml}$ to about 1000 $\mu\text{g/ml}$.

5. (Currently Amended) A method of stimulating or otherwise facilitating formation of colonies of mammalian pancreatic epithelial cells, wherein said pancreatic epithelial cells are isolated from fetal ~~or adult~~ pancreas and said colonies comprise three-dimensional cystic-ductular structures containing insulin-secreting cells, said method comprising culturing said pancreatic epithelial cells in the presence of a bone morphogenetic protein (BMP) and at least one of laminin-1 or laminin-1-containing extracellular matrix ECM for a time and under conditions sufficient for said colonies to form.

6-7. (Canceled)

8. (Previously Presented) The method of Claim 5 wherein the BMP molecule is a member of the TGF- β family.

9. (Previously Presented) The method of Claim 8 wherein the BMP molecule is a heterodimer from two or more BMP molecules.

10. (Previously Presented) The method of Claim 5 wherein laminin-1 is provided at a concentration of from about 1 $\mu\text{g/ml}$ to about 1000 $\mu\text{g/ml}$.

11. (Previously Presented) The method of Claims 1 or 5 wherein the pancreatic epithelial cells are embryonic stem cells-derived precursor cells that are committed to the pancreatic lineage.

12. (Currently Amended) A method of stimulating or otherwise facilitating formation of cystic epithelial colonies containing insulin-secreting cells, said method comprising culturing mammalian pancreatic epithelial cells in the presence of a BMP and at least one of laminin-1 or laminin-1-containing extracellular matrix ECM for a time and under conditions sufficient for said colonies to form, wherein said pancreatic epithelial cells are isolated from fetal or adult pancreas, and wherein said colonies comprise existing detected structures containing insulin-secreting cells.

13. (Previously Presented) The method of Claim 12 wherein the BMP molecule is a member of the TGF- β family.

14. (Previously Presented) The method of Claim 13 wherein the BMP molecule is a heterodimer from two or more BMP molecules.

15. (Previously Presented) The method of Claim 12 wherein laminin-1 is provided at a concentration of from about 1 $\mu\text{g/ml}$ to about 1000 $\mu\text{g/ml}$.

16-32. (Canceled)